Cognitive Orientation to daily Occupational Performance (CO-OP)

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Goal of the Presentation

An introduction to this task oriented / occupation based aproach

Create:
• A general understanding of what CO-OP is (about)
• Introduction to future CO-OP workshops
Plan for the Presentation

- Child with DCD
- Task oriented: the CO-OP approach
- CO-OP goals
- CO-OP protocol
- CO-OP the evidence
DCD is hypothesized as essentially a motor learning disability and treatment should be approached from a *skills acquisition* or *learning perspective*, rather than a neurodevelopmental perspective.

*(Polatajko et al., 2001)*
Client Centred

CO-OP

Performance Based

Problem Solving

Motor Learning and Performance

Learning Theory

EBP

ICF

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Motor Skill Acquisition

From Traditional Hierarchical Model(s)

To Dynamic System Model of *motor learning*:

*Interaction Child, Task, Environment*
Motor learning: the cognitive phase

- Eyes focus forward
- Feet on the pedals
- Frond wheel towards the direction
- Start with feet on the ground
- Turn with the curve
- Small pedal movements
Motor learning the associative and autonomic phase

Explore the plan, fine tuning and practice in different contexts

Autonomic phase: let’s go for a ride in the parc

Associative: I drive fast and don’t fall backwards
Shift in Professional Thinking and Reasoning

Deficit Driven Model

Cognitive Learning Models:
- e.g.: Motivation, Problem solving

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Becoming a problem solver

Features:

• Generalisation and transfer of learning
• Motivation: Goal setting
• Strategy use, Guided discovery, Enabling principles
• Involvement of significant others
• Home work
CO-OP is “a client-centred, performance-based, problem solving approach that enables skill acquisition through a process of strategy use and guided discovery”

(Polatajko & Mandich, 2004, p. 2)
Four major objectives

1. Skill acquisition
2. Strategy use
3. Generalization
4. Transfer
The protocol: 7 Key features

- Client Chosen Goals
- Dynamic Performance Analysis
- Cognitive Strategy Use
- Guided Discovery
- Enabling Principles
- Parent Significant other involvement
- Intervention Format

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CO-OP

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CO-OP: 3 client chosen goals

Motivation!

- Contact parents
- Logbook
- PACS /Photo interview
- COPM
- Baseline PQRS
- Reality Check goals

Child & parents
therapist
CO-OP

The protocol: 7 Key features: DPA

COGNITIVE ORIENTATION to daily OCCUPATIONAL PERFORMANCE

CO-OP

Client Chosen Goals
Dynamic Performance Analysis
Cognitive Strategy Use
Guided Discovery
Enabling Principles
Parent Significant other involvement
Intervention Format
CO-OP: How To Do It

Therapist Role

- Identify plan / strategies
- Facilitate discovery, skill acquisition, performance

Techniques

- Dynamic performance analysis
- Guided Discovery Engaging the child

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Dynamic Performance Analysis (DPA)

Dynamic performance analysis (DPA) for each child chosen goal

– Objectives

  • to identify performance problems per goal: 3 break down points
  • to identify potential strategies to enable performance: domain specific strategies
Dynamic Performance Analysis (DPA)

<table>
<thead>
<tr>
<th>DPA</th>
<th>Activity analysis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Breakdown points:</td>
<td>What is the problem:</td>
</tr>
<tr>
<td>- child</td>
<td>- neurodevelopmental</td>
</tr>
<tr>
<td>- environment</td>
<td>- sensory-motor</td>
</tr>
<tr>
<td>- task</td>
<td>- visual-perceptual</td>
</tr>
</tbody>
</table>

**Task analysis**

**Analysis of components**
Let’s Do a DPA

Task: ‘Neck tie’

Performance breakdown points:

– Child/person
– Task
– Environment
The protocol: 7 Key features: cognitive strategy use

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Skill Acquisition Through Strategy Use

Cognitive Strategy:

• a cognitive tool put into place to help learn, memorize and problem solve
• a goal directed, cognitive operation used to facilitate learning and problem solving
Why Use Strategies?

ABILITY -----> SKILL

<table>
<thead>
<tr>
<th>STRATEGY</th>
</tr>
</thead>
</table>
CO-OP: Strategies

Global Strategy

Goal
Plan
Do
Check
Problem Solving Framework: use of meta cognition

<table>
<thead>
<tr>
<th>GOAL</th>
<th>What do I want to do?</th>
</tr>
</thead>
<tbody>
<tr>
<td>PLAN</td>
<td>How am I going to do it?</td>
</tr>
<tr>
<td>DO</td>
<td>Do it (carry out the plan)</td>
</tr>
<tr>
<td>CHECK</td>
<td>How well did my plan work?</td>
</tr>
</tbody>
</table>

Self-interrogation
Self-monitoring
Self-observation
Self-evaluation
CO-OP: Strategies

Global Strategy

Domain Specific Strategies

- Body position
- Attention to task
- Task specification / modification
- Supplementing task knowledge
- Feeling the movement
- Verbal motor mnemonic
- Verbal rote script

Goal
Plan
Do
Check

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DSS some data

Rodger & Polatajko, 2005 (Based on work by C. Bernie)
Let’s Do *an observation*
## Strategies: some Examples

<table>
<thead>
<tr>
<th>Circumstance</th>
<th>Strategies Used</th>
</tr>
</thead>
<tbody>
<tr>
<td>When the child does not have enough information to specify the GOAL or PLAN</td>
<td>▪ Supplementing task knowledge</td>
</tr>
<tr>
<td></td>
<td>▪ Task specification</td>
</tr>
<tr>
<td></td>
<td>▪ Motor mnemonic</td>
</tr>
<tr>
<td>When the child does not DO the movement</td>
<td>▪ Task modification</td>
</tr>
<tr>
<td></td>
<td>▪ Body position</td>
</tr>
<tr>
<td></td>
<td>▪ Feeling the movement</td>
</tr>
<tr>
<td></td>
<td>▪ Attention to doing</td>
</tr>
<tr>
<td>When the child can do the movement but required verbal guidance to practice</td>
<td>▪ Verbal Guidance</td>
</tr>
<tr>
<td></td>
<td>▪ Verbal self-guidance</td>
</tr>
<tr>
<td></td>
<td>▪ Verbal Rote Script</td>
</tr>
</tbody>
</table>
The protocol: 7 Key features: Guided discovery

- Client Chosen Goals
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Guided Discovery

- One thing at the time
- Don’t tell, just ask
- Coach, don’t adjust
- Make it obvious

Instruction

- Verbal instruction
- Sharing knowledge
- Giving and asking feedback
Why Guided Discovery?

“Remember also that each time one prematurely teaches a child something he could have discovered for himself, that child is kept from understanding it completely”

J. Piaget

in: Polatajko & Mandich, 2004
| 1 Pre intervention session | * Child identifies 3 goals:  
  – Logbook  
  – PACS & COPM  
 * Performance Quality Rating (PQRS)  
 * Dynamic Performance Analysis (DPA) |
|-----------------------------|-----------------------------------------------------------------|
| 10 Intervention sessions   | Cognitieve strategie use by means of ‘guided discovery’ and ‘enabling principles’  
  1: Global strategy: Goal Plan Do Check  
  2 t/m 10: Apply Goal Plan Do Check and discover Domain Specific Strategies |
| Homework                    | * Generalisation en transfer |
| 1 Post Intervention session | Evaluation of the occupational performance  
  – PQRS & COPM |

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CO-OP highlights

Guided Discovery

Therapeutic techniques
Enabling principles

Global strategy (GPDC) to enable task performance
Domain Specific strategies to enable skill acquisition

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CO-OP, the evidence

• **Exploration of cognitive approach**
  – 10 single case experiments (Wilcox 1994)
  – 4 systematic replications (Martini, 1994)
  – Informal 2 yr. follow-up (Polatajko et. al., 1996)
• **Domain specific strategies** (Mandich, 1997)
• **Informal replications** (Polatajko et. al., 2001)
• **CO-OP trial** (Miller et. al. 2001)
• **In-depth Interviews with parents** (Segal et al. 2002)
• **In-depth Interview with families and children** (Mandich et al., 2002)
• **Secondary Analyses** Strategy use (Sangster et al, 2005; Batte; Mendes) en Self-efficacy (Mendes & Polatajko, 2004)
• **CO-OP with younger children** (Ward, 2004)
• **Independent studies**: Strategy use (Rodger & Liu, 2008), Group (Green, Chambers, & Sugden, 2008), Parents’ Group (Donna, 2007)
CO-OP: the Evidence

Studies with other populations/forms

- Pre-schoolers (Taylor, Fayed, & Mandich, 2007; Ward, & Rodger, 2004).
- TBI (Samonte, Solish, Delaney, & Polatajko, 2004)
- Asperger’s Syndrome (Rodger, et al., 2007; Rodger, & Brandenburg, In Press; Rodger, et al., In Press).
- CP (Cameron et al, 2009)
- Child ABI (Missiuna et al, 2009)
- Adult ABI (Dawson, et al., 2009)
- Adult Stroke (McEwen et al., 2009; Henshaw et al., 2009)
- Adult stroke - transfer (McEwen et al., 2009)
CO-OP Workshops in Norway: *Mål, Plan, Do, Sjekk*

Beginners workshop in Mai 2011?

http://www.ot.utoronto.ca/coop/instructors.htm

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